

**Table S2:** Parameters issued from the modelling exercise on a real dataset with model (a), model (g) and model (l)

Parameters		Method (a)		Method (g)		Method (l)	
		Estimate	RSE%	Estimate	RSE%	Estimate	RSE%
TG <sub>0</sub>	Initial tumor size	0.292	34.1	0.186	28.3	0.252	2.1
$\lambda_0$	Exponential growth rate	0.0131	23.7	0.0178	9.83	0.0156	2.7
$\lambda_1$	Linear growth rate	3.88	14.3	5.27	20.9	3.73	5.2
$\omega_{\lambda_1}$	Interindividual variability on $\lambda_1$	0.057	>100	0.0783	>100	0.055	30.5
$k_2$	Maximal Cytotoxic effect	0.165	47.7	0.201	58.2	0.156	4.8
Cp <sub>50</sub>	Concentration leading to 50% of maximum cytotoxic effect	1580	>100	584	45.5	385	14.6
n	Coefficient of sigmoidicity	13.3	>100	10.1	15.9	9.0	2.5
$k_1$	First order rate of transit	0.371	>100	0.49	10.5	0.807	9.9

RSE%: relative standard error